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10/023,246	12/17/2001	Ajith Kuttannair Kumar	20-LC-5014(320)	6291

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EXAMINER

KIM, CHONG HWA

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

10/023,246

Applicant(s)

KUMAR ET AL.

Examiner

Chong H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The Examiner acknowledges the applicant's Amendment filed Jun 26, 2003 in response to the Office action made on Mar 27, 2003 and canceling of claims 9-11.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S.

Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a wayside rail lubrication apparatus for lubricating rails for the passage of trains having one or more locomotives constituting a consist pulling a plurality of load cars along the rails, the apparatus comprising;

a sensor 9 associated with a first position on a rail for producing a lubrication signal when a locomotive pulling a plurality of load cars moves adjacent the first position;

a lubricant dispensing apparatus 12 and 20 for applying a lubricant to the rail at a second position on the rail in response to the lubrication signal, the lubricant adapted to reduce the friction between wheels of the load cars and the rail, the first position and the second position being separated by a distance on the rail sufficient to prevent the lubricant from contacting any

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drive wheel of the locomotive consist, whereby friction at the rail is reduced for the load cars of the train without loss of tractive effort of the locomotive consist on the rails;

the lubricant dispensing apparatus further comprising a lubricant container (inherent); a pump 36 for delivering lubricant from the lubricant container to the rail; and a refilling device (inherent) for adding lubricant to the lubricant container at no more than a predetermined rate;

further comprising a bypass device 35 for selectively preventing the lubricant dispensing apparatus from applying the lubricant in response to the lubrication signal;

a controller 38 terminating the application of the lubricant to the rail by the lubricant dispensing apparatus before a number of the load cars at a rear of the train pass the second position.

3. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a wayside rail lubrication apparatus for lubricating rail for the passage of trains along the rails, the apparatus comprising;

a detection apparatus 9 for providing a lubrication signal in response to the presence of a train on a rail adjacent the detection apparatus;

a lubricant dispensing apparatus 12 and 20 for applying a lubricant to the rail in response to the lubrication signal to reduce friction on the train on the rails;

a bypass device 38 for selectively preventing operation of the lubricant dispensing apparatus in applying the lubricant in response to the lubrication signal under circumstances in which the addition of lubricant onto the rails is undesirable.

4. Claims 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a wayside rail lubrication apparatus for lubricating rails for the passage of trains having one or more locomotives constituting a consist pulling a plurality of load cars along the rails, the apparatus comprising;

a dispenser 12 and 20 applying lubricant to a rail in response to the presence of a vehicle wheel at a location on the rail;

a timing delay (inherent since the controller 38 uses time) associated with the dispenser for delaying the application of lubricant for a predetermined time period after the vehicle wheel moves adjacent to the location on the rail, with lubricant being applied to the rails only after drive wheels of the locomotive consist have moved past the dispenser, whereby friction at the rail is reduced for the load cars without loss of tractive effort of the locomotive consist on the rails;

wherein the timing delay apparatus comprises a lubricant pump 36 and a conduit for flow of lubricant downstream of the pump which presents a volume to be filled with lubricant before lubricant is discharged to the rail.

5. Claims 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a wayside rail lubrication apparatus for lubricating rails for the passage of trains having one or more locomotives constituting a consist pulling a plurality of load cars along the rails, the apparatus comprising;

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a sensor 9 producing a lubrication signal responsive to the presence of a train on a rail;

a dispenser 12 and 20 applying a lubricant to a section of the rail in response to the lubrication signal only after the locomotive has passed the section of rail to prevent the lubricant from contacting any wheel of the locomotive consist, whereby friction at the rail is reduced for the load cars of the train without loss of tractive effort of the locomotive consist on the rails;

wherein the dispenser further comprises a timing circuit (in the controller 38) for delaying a start of application of the lubricant to the section of rail for a predetermined time period after generating of the lubrication signal;

a sensor (as described in column 3, lines 56-58) detecting an end of the train; and

a controller 38 terminating the application of lubricant to the section of rail before the end of the train passes the section of rail.

6. Claims 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a method of applying lubricant to a rail for lubricating the rail for the passage of a succession of trains along the rail, the method comprising;

applying lubricant to a rail at a first time in response to the presence of a first train at a location along the rail;

sensing the presence of a second train at the location at a second time;

applying lubricant to the rail in response to the presence of the second train at the location, with the quantity of lubricant applied at the second time being responsive to the time span between the first and second times;

applying no lubricant at the second time if the time span has not exceeded a predetermined minimum.

7. Claims 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar, U.S. Patent 6,585,085.

Kumar shows, in Figs. 1-6, and discloses in Abstract, a method of applying lubricant to a rail for lubricating the rail for the passage of trains each having one or more locomotives constituting a consist, the consist located at a head of train at a leading end of the train, and an end of train at a trailing end of the train as the train travels along the rail, the method comprising;

sensing the presence of a train on a rail;

applying a lubricant to a section of the rail in response to the presence of the train after the consist at the head of the train has passed the section of rail;

terminating the application of the lubricant to the section of rail before an end of the train passes the section of rail so that the quantity of lubricant on the section of rail is dissipated by wheels of a plurality of cars proximate the end of the train (as described in column 4, lines 35-48);

detecting the end of the train proximate a position of the rail a predetermined distance from a position of a lubricant applicator; and

terminating application of the lubricant by the lubricant applicator in response to the detection of the end of the train.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Effmert et al., DE 195549219C.

Kumar shows, as discussed above in the rejection of claim 5, the wayside rail lubrication apparatus comprising the bypass device but fails to show the bypass device comprising a communication device located on the vehicle for controlling the bypass device from the vehicle.

Effmert et al. discloses, in Abstract, a lubrication system comprising the bypass device 40 having a communication device (transponder) located on the vehicle from controlling the bypass device from the vehicle.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made modify the bypass device of Kumar with the bypass device having the communication device as taught by Effmert et al. in order to provide a more reliable lubrication system wherein friction is reduced throughout the rail system.



10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Arens et al., U.S. Pub No. 202/0056592 A1.

Kumar shows, as discussed above in the rejection of claim 5, the wayside rail lubrication apparatus comprising the bypass device but fails to show the bypass device comprising a remote signal reception device.

Arens et al. teaches, in paragraph [0010], a wayside rail lubrication apparatus comprising a remote signal reception device for receiving a signal from a remote location for controlling the dispensing of the lubricant.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the bypass device of Kumar by implementing the remote signal reception device of Arens et al. in order to provide an easier method of monitoring and controlling the lubricant dispensing operation so that a labor cost can be reduced.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Kostelny-Vogts et al., U.S. Pat. 6,446,754 B1.

Kumar shows, as discussed above in the rejection of claim 5, the wayside rail lubrication apparatus comprising the bypass device with the sensors, but fails to show an environmental sensor.

Kostelny-Vogts et al. discloses, in column 5, lines 1-9, a wayside rail lubrication apparatus comprising a bypass device 62 having an environmental sensor 79 generating a signal to the bypass device for preventing the lubricant dispensing apparatus from applying the lubricant in response to a predetermined environmental condition.

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the bypass device of Kumar by implementing the environmental sensor as taught by Kostelny-Vogts et al. in order to reduce the cost of operation by preventing unnecessary waste of lubricant.

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-5, 7, 8, and 12-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Monday - Friday; 9:00 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

chk  
August 20, 2003

  
CHONG H. KIM  
PRIMARY EXAMINER